

REMARKS

This is intended as a full and complete response to the Final Office Action dated December 17, 2003, having a shortened statutory period for response set to expire on March 17, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 3-6, 20-23, 29-33 and 37-41 remain pending in the application and are shown above. Claims 3, 22, 31 and 37 have been amended. Claims 3-6, 20-23, 29-33 and 37-41 stand rejected and claims 20 and 37 stand objected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

These amendments are not presented to distinguish a reference, thus, the claims as amended are entitled to a full range of equivalents if not previously amended to distinguish a reference.

The drawings stand objected under 37 CFR 1.83(a) for not showing every feature of the invention in the claims. The Examiner states the "mixer" and the "fitting" are not shown in the figures while appearing in the claims. Applicants respectfully traverse the objection.

The elements "mixer" and "fitting" do not appear in any currently pending claim. Claims 1, 9, 11, 34, 36, 44, 48 and 50 contained the aforementioned elements but were cancelled upon entry of the prior response. Accordingly, Applicants respectfully request withdrawal of the objection.

Claims 3-6, 20-23, 29-33 and 37-41 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over co-pending claims 12-19 of United States Patent Application Serial No. 09/798,258, in view of United States Patent No. 5,423,936 (herein *Tomita*). Applicants respectively traverse the rejection.

United States Patent Application Serial No. 09/798,258 published on September 5, 2002, as United States Patent Publication No. 20020121241. Every claim in the present application provides a lid assembly comprising a reservoir positioned on the lid

Page 6

248997_1

and fluidly connected to a gas manifold. Co-pending claims 12-19 of United States Patent Application Serial No. 09/798,258 or Publication '241 alone or in combination with Tomita, do not teach, show or suggest a lid assembly comprising a reservoir positioned on the lid and fluidly connected to a gas manifold. Furthermore, there is no suggestion in the specification or claims of Publication '241 alone, or in combination with Tomita, of a lid assembly comprising a reservoir positioned on the lid and fluidly connected to a gas manifold. Therefore, the pending claims are not properly rejected under obviousness double patenting or under §102(e). Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 3-6, 20-23, 29-33 and 37-41 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over co-pending claims 1-22 of United States Patent Application Serial No. 09/798,251, now United States Patent No. 6,660,126. Applicants respectively traverse the rejection. Every claim in the present application provides a lid assembly comprising a reservoir positioned on the lid and fluidly connected to a gas manifold. Issued claims 1-28 of Patent '126 alone or in combination, do not teach, show or suggest a lid assembly comprising a reservoir positioned on the lid and fluidly connected to a gas manifold. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 20 and 37 stand objected due to informalities. Claim 37 has been amended to clarify the invention. Claim 20 stands objected because claim 20 depends from a higher numbered claim, claim 22. Applicants are unaware of a rule requiring dependent claims to have a higher claim number than the independent claim from which they depend. Applicants request withdrawal of the objection.

Claims 3-6 stand rejected under 35 USC § 112 as failing to comply with the enablement requirement. The Examiner states that claim 1 requires a "mixer" and the specification does not provide a description in such a way to enable one skilled in the art to which it pertains to make and/or use the invention. Applicants respectfully traverse the rejection.

Claim 1 was cancelled in an earlier response. Claims 3-6 do not state a mixer anywhere in the claims. Applicants respectfully request withdrawal of the rejection.

Page 7

PATENT

Any: Dkt. No. AMAT/5136/CPW/GVD/PJS

Claims 3-6, 20-23, 29-33 and 37-41 stand rejected under 35 USC § 103(a) as being unpatentable over *Conger, et al.*, United States Patent No. 4,761,269, (herein *Conger*), in view of *Hao, et al.*, United States Patent No. 6,123,775, (herein *Hao*), on grounds that it would have been obvious for one of ordinary skill in the art to combine the baffle plate and lid assembly of *Hao* with the lid assembly of *Conger* which includes a "reservoir" (56 in Figure 1). Applicants respectfully traverse the rejection.

Conger teaches a deposition apparatus containing a conventional bubbler comprising a stainless steel ampoule (56) immersed in a conventional temperature-controlled recirculating bath (58). The ampoule is a remote unit that is detached from the deposition chamber. *Conger* flows a nonreactive gas, such as hydrogen, through the heated ampoule to vaporize a precursor, such as a metalorganic compound. The gas source (18) represents a metalorganic compound through which a carrier gas is bubbled to inject the compound in vapor form into the chamber (12). *Hao* teaches a baffle plate assembly coupled to a gas distribution lid.

Conger and *Hao*, alone or in combination, do not teach, show or suggest a lid assembly for a semiconductor processing system, the lid assembly comprising a lid having first and second opposed surfaces, a plurality of controllable flow channels extending from the first and second opposed surfaces, and a gas control system disposed on the first surface and operably opening and closing the channels, wherein the gas control system comprises a gas manifold disposed on the lid, at least one valve coupled to the gas manifold adapted to control a flow through one of the flow channels and a reservoir positioned on the lid and fluidly connected to the gas manifold as recited in claim 3 and claims 4-6 which depend thereon.

Also, *Conger* and *Hao*, alone or in combination, do not teach, show or suggest a lid assembly for a semiconductor processing system, the lid assembly comprising a lid having first and second opposed surfaces, the first and second opposed surfaces having a first inlet channel, a second inlet channel and a third inlet channel disposed therethrough, a gas manifold coupled to the first surface of the lid, the gas manifold comprising a body having an upper surface and lower surface, a first channel, a second channel and a third channel each extending through the gas manifold to the lower

Page 8

248537_1

PATENT

App. Dkt. No. AMAT/618MCPWCVGRJUS

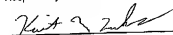
surface, a valve coupled to the gas manifold and a gas reservoir positioned on the lid and fluidly connected to the gas manifold, as recited in claim 22 and claims 20, 21 and 23 which depend thereon.

Also, *Conger and Hao*, alone or in combination, do not teach, show or suggest a lid assembly for a semiconductor processing system, the lid assembly comprising a lid having first and second opposed surfaces, the first and second opposed surfaces having a plurality of inlet channels disposed therethrough, a valve, a gas manifold coupled to the first surface of the lid, the gas manifold comprising a body having an upper surface and lower surface, a plurality of gas channels extending through the gas manifold to the lower surface and a thermal conditioning channel disposed in the gas manifold fluidly coupled to at least one of the plurality of gas channels by the valve and a gas reservoir positioned on the lid, fluidly connected to the gas manifold and fluidly coupled to the valve by the thermal conditioning channel, as recited in claim 31 and claims 29, 31-33 and 37-41 which depend thereon.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show or suggest the invention as claimed. Applicants request withdrawal of the rejection.

Having addressed all issues set out in the Final Office Action, Applicants respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



Keith M. Tackett
Registration No. 32,008
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant

Page 9

248937_1